PRESERVED

App. F. IX-4

1934 (Ire)

File No. 44-34

Serial Nos. 6, 9

Previous References
Ire 44-34 (2-5)
I.W 8-34 (1-7 Ire 20)
Ire 44-34 (1, 6a ?, 7a, 8)
Later References
I. W 22-36 (1-4, 12-16)
" 49-37 (1-2)

GENERAL AND REVENUE SECRETARIAT.

Serial Nos. Two

Part B for April

SUBJECT.

A scheme for the manufacture of Cement at Bhadravati as an adjunct of the Mysore Iron and Steel Works

D 6018-5 Dr. 2-4-36

To Sri Ire. ii Comptt Dte.
Financial sect iii Dir of Geology
Secy. Bd of management
M. Iron Works.

Accord sanction to the establishment of a Cement Factory at Bhadravati

2041

Scheme for the manufacture of Cement

General and Revenue Secretariat | I & C File No. 44 of 193 4. (1) | [App. F. III.—2

Serial No.

6

From the Secy, Board of Ind. & Commce

Letter No 542/D 29.12.35

Forwards copies of the proceedings of the Mineral Industries Sub Committee of the Board of the I & C with a copy of the note by the Development Secy & Govt, noted, on the subject of manufacture of Cement & states that the Resolution of the Sub Committee that the factory be located at Bhadravati has been accepted by the Board

C & J

L

K

The Resolutions of the Sub Committee & the Board are flagged C, J and K

The Secy, Board of Management, Mysore Iron & Steel Works, Bhadravati, will be requested to draw up a trial Scheme for the consideration of Govt Subd for perusal & orders.

kpr KP 3/1/36

Dy Secy 4/1

4 3 4 9 4 4 1

The proceedings of the sub-committee and the note give all relevant particulars.

Proposals with detailed estimates of capital and operating cost have been received from the following firms.

1. Messrs Polysius H. G Dutton
2. " Krupp India Limited

NOTE—Contn Sheet.

WD 03594—GPB—30,000—13-7-35

(2)

File No. of 193 General and Revenue Secretariat

3 Messrs Siemens Schuckert.

4 " Thieme Germany

5 " F. L. Smidth & Co Copenhagen.

The proposal and estimates have been discussed in very great detail with the figures of Messrs Krupp, F. L. Smidth and one or two other firms.

The capital and operating estimates have been based on the information and knowledge local conditions.

... Mr directed by the Dewan, I had a general talk in regard to Salem with Sir Purushottam and Thakurdas. He told me that Messrs F. L. Smidth & Co who had dispatched machinery largely in India and had the cement plant recently were very reliable people and that he would unhesitatingly accept their figures. The gentleman first received from them about that the estimate of capital cost prepared here is fairly accurate. The firm's figures Mr Madsen visited Bhavani recently and the manufacturing costs were discussed with him in detail and he feels that we ought to do very much better than the estimates cost of Rs 25/- a ton. He felt that the actual cost would be much nearer Rs 20 a ton

Serial No.

Sir P. Thakurdas also said that there is likely to be no difficulty in maintaining prices in agreement with the cement marketing Board or the new merger organisation. As long as we do not sell beyond the Hyderabad State and keep near their general level of rates, ~~that~~ is the question may not arise at all.

In regards the final selection of the particular kiln, process etc best suited to our conditions, it is proposed to consult an expert and correspondence has been started with Mr Symons who has had 30 years experience of cement and been associated with the Coimbatore & Gwalior Plants. Action will be taken to negotiate and order machinery after consulting him.

In the meanwhile the G.O sanctioning the scheme may be issued.

Secretary

Dewan

OFFICE OF THE SECOND MEMBER OF COUNCIL. 3 FEB. 1936 No. 584

DEWAN'S OFFICE 3 FEB. 1936 No. 4820

FINANCIAL SECRETARIAT G.O.No. Fi. 121 5. FEB. 1936

NOTE.—Contd. Sheet.

WD 03594—GPB—30,000—13-7-35

MW. 1.2.36.

MM 3/2/36

MI 3-2-36

MW. 4.2.36

4.2

(4)

File No. of 193 . | General and Revenue Secretariat

The proposal is to sanction a scheme for the manufacture of cement at Bhadravati as an adjunct of the Mysore Iron and Steel Works at a capital cost of about Rs 8 lakhs (initial capital -- Rs 5.5 lakhs and working capital -- Rs 2.25 lakhs). The points for consideration are:-

(1) whether the scheme is urgent;

(2) whether it is really remunerative, justifying the investment of borrowed funds;

(3) whether funds for the same could be made available.

This is a scheme not contemplated at budget time last year and funds for the purpose also are not available in the current year's budget. The scheme has been under consideration for a long time past and there are not sufficient reasons to treat the scheme as emergent and not deferrable till the next official year. The proper procedure in such cases is to consider the scheme at the next budget time, and sanction it after necessary provision therefor is included in the budget.

The scheme involves an initial capital expenditure of Rs 5.5 lakhs and a working capital of Rs 2.25 lakhs and is required to be financed out of borrowed funds. There will be justification for investing borrowed money on any scheme only when there is a definite assurance that it will yield a net return of at least 8 per cent (minimum interest 3%, cost of administration of debt about 1% and sinking fund contribution 4%)

Serial No.

after meeting working expenses and depreciation. The estimated total output for each year is 18000 tons of cement (60 tons a day for 300 days) and the quantity of cement consumed within the state during 1934-35 is stated to be 15000 tons. It is estimated that the cost of manufacture of one ton of cement, including depreciation and interest on working capital at 5%, will be about Rs 25 a ton (ii) the Railway freight from Bhadravati to Bangalore and other places will not exceed Rs 7 to 8 per ton and (iii) a profit of Rs 3 per ton (or Rs 54,000/- for 18000 tons) will be realised taking the selling price at Rs 35 per ton. The scheme is thus expected to yield a net return of about 10% on the fixed capital after providing interest on working capital at 5%.

In March 1935, the cost of manufacturing one ton of cement was estimated at Rs 31, while it is now estimated at Rs 25/- a ton (i) by reducing the cost of limestone from Rs 7/- to Rs 2-8-0 a ton, (ii) reducing the cost of slag from Rs 4 a ton to less than a rupee, (iii) reducing the cost of coal (fuel) and (iv) reducing the provision for depreciation from about 11% to 8%. How far these variations in the calculations are justifiable and whether all items of expenses have been taken into account in working out the cost of manufacture require to be examined in detail, as any omission in

NOTE.—Contn. Sheet.

WD 03594—GPB—30,000—13-7-35

(6)

File No. of 193 . | General and Revenue Secretariat

this respect will materially affect the financial results of the scheme. Lower rates for limestone, slag and fuel have been taken on the ground that the Mysore Iron Works Bhadravati will be able to supply them at these rates, The Iron works have perhaps to be specifically addressed as to whether it will be possible for them to supply these materials at the proposed reduced rates. The 8% provided for depreciation seems to be low, and has to be raised to at least 10%. On what data the original rate was fixed at 11% and why it was reduced to 8% in the second note are not clear. It is also not clear whether the Trade expenses including commission to agents have also been included in the manufacturing cost. More details about the working expenses are necessary.

Based on actual cost data.

The General Manager was present at the meeting this was passed.

The net return is taken at about 10% only on the fixed capital by estimating the selling price at Rs 35 a ton. The present selling price of Coimbatore cement is stated to be about Rs 34 a ton, ~~and at this rate~~ the ~~net profit~~ net profit will be only Rs 36,000 or about 6½% on the fixed capital outlay (excluding working capital), assuming that the entire quantity manufactured will be sold. The market price of cement is likely to fluctuate ~~widely~~ on account of competition

(The factory) taking the selling price at Rs 34/- per ton)

Yes 3 Rs 70 TR Bangalore

etc., and if the price still goes down, the net return from the scheme will decrease further.

For reasons stated above, it cannot be definitely

(8)

For Disposal by Circulation.

No. C. 195

9 1935-36.

GENERAL AND REVENUE SECRETARIAT.

Council Matter.

Subject

Scheme for the manufacture of cement at Bhadravati as an adjunct of the Mysore Iron and Steel Works.

Circulated to the Members of Council.

By Order,

12th February 1936

Chief Secretary to Government.

5/16 5/16 17/2 **First Member of Council.** JPM 17/2

DEWAN'S OFFICE
20 FEB. 1936
No. 6248

6316 17/2 **Second Member of Council.** Seen

7. N. Signed by Member.

CEB 20/2/36

9

Final Note by the Second Member of Council.

Subject.—

Establishment of a Cement Factory in Bhadravati.

These papers relate to a proposal to establish a Cement Factory at Bhadravati as an adjunct to the Iron and Steel Works.

The details of the scheme are explained in Mr. Venkatanaranappa's printed note which was placed before the Mineral Industries Sub Committee in September 1935 and the Board of Industries and Commerce in December 1935. The capital cost of the scheme is estimated at Rs.5½ lakhs, but in view of certain quotations for machinery which have been since received, it seems probable that a somewhat larger amount (say Rs.6 lakhs) will have to be provided on account of capital outlay.

C
D.
E

As to the cost of manufacture, the rate assumed viz., Rs.25 per ton is, in the opinion of most of the persons consulted, reasonable. Individual items are however under further scrutiny.

Investigations are in progress to determine the exact ratio of slag and clay to be used in the composition of raw powder. The results are awaited. These and other technical details of the scheme will be shortly examined on the spot by one Mr. Symons who has had long and varied experience of cement manufacture in India.

Subject to this expert examination, it is proposed to accord administrative sanction to the scheme so that the further work of investigation may be proceeded with rapidly.

Pages 388 ff

The proposal has been agreed to by the Dewan and the First Member of Council and is submitted for His Highness' gracious sanction.

M. Rama Rau
MEMBER OF COUNCIL.

Bangalore,
20th February 1936.

10

Submitted to His Highness.

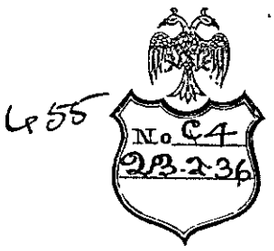
I submit herewith a Final Note by the Second *Member of Council on the subject of* the establishment of a Cement Factory in Bhadravati, *for His Highness' gracious approval.*

Mirza M. Ismail

Dewan.

Bangalore,
20th February 1936.

Record of Cases submitted for the Orders of His Highness the Maharaja.



L 455

Subject.

Establishment of a Cement Factory in Bhadravati.

No. 437

Order.

~~KRW~~

25/2/36

27/2/36

General and Revenue
Secretariat

12

C.195

SUBJECT:- Establishment of a Cement factory in Bhadravathi

(*)

31. All urgent or confidential files returned with His Highness' orders may in the absence of instructions or indications to the contrary, be ordinarily circulated to the Members of Council for perusal after the issue of orders.

33. The Secretaries concerned should see that orders in the cases referred to above are issued at once and that the files are returned immediately after to the Chief Secretary for circulation to the Members.

34. In all other cases, the files will first be circulated to the Members of Council at Head-quarters and then sent to the Secretariat concerned for the issue of orders.

Circulated to Members of Council for perusal of His Highness' orders before/~~after~~ issue of orders. (*) (*Vide Rules* 31, 33 and 34 of the Subsidiary Rules for the conduct of business of Council in the Manual of Council Rules and Procedure.)

Chief Secretary to Government.

Through the Secretary to Government,

~~Development~~ Department.

27.2.

6174
28.2

FIRST MEMBER OF COUNCIL.

28/2

6602
28/2

SECOND MEMBER OF COUNCIL.

28/2/36

Dev. Secy with Compliments

28-2-36

NOTE.—Contn. sheet.

Manufacture of Cement

153

General and Revenue Secretariat | File No. | of 193 | [App. F. III—2

Serial No.

During my visit to Bombay, I have discussed the proposition in detail with Mr. Symonds who has had a very intimate acquaintance with the chemistry & technique of the cement industry in India. He felt that our raw materials are quite suitable and that if necessary slag, clay and limestone can all be worked up together to make a fine grade of cement. He realises that we want to make the very best grade and his advice is that we should be careful in choosing the process machinery to see that they suit our raw materials.

The question of this appointment has been separately submitted.

May the draft G.O. issue.

I have also spoken to Mr Matthan.

Secretary Member

1.4.36.

1/4/36

1.4.36.

1.4.36.

Fl. cons 1643

For financial opinion, please see pages 4 to 4.

Draft and fair sheet.

For perusal.

2/4/36.

NOTE—Contn. Sheet.

2/4

WD 01536—GPB—7,500—5-4-34

Issue

2/4/36.

4

34

9 te File No. 44 of 1934. | General and Revenue Secretariat

G.O. No. D. 6012-15 Aj 2-4-36 | 9

To. The Dir. Ste
" Secy. Board of Management Mysore Iron and Steel Works
" Dept of Geology
" Comptr thro H. Deptt.

Accords sanction to the establishment of a Cement Factory at Bhadravati

Sir C. to Govt. Rep. to Govt. of India
DEVELOPMENT BRANCH

B

18/4/36

REV.

18 APR. 1936

DEVELOPMENT BRANCH

30/6/36

I&C.44-34-6 16

B.I.C. 1.]

BOARD OF INDUSTRIES & COMMERCE,

No. 572/Sec 4. *Bangalore, dated* 25 December 193 5.

3/12 4

FROM H.K. Ramiengar, Esq.,M.A.(Hons), 3041
[redacted]
Secretary, Board of Industries and Commerce,
BANGALORE.

To

M. Venkatanaranappa, Esq.,B.A.,
Secretary to the Government of Mysore,
Development Department, Bangalore.

SIR,

I&C44-34 Sh.2-5 B

Subject:- Scheme for the manufacture of cement.

I am directed to state that the manufacture of cement was one of the subjects selected for consideration by the Board during the year 1934-35 and that it was referred to the Mineral Industries Sub Committee for consideration.

At their meeting held on 13th February 1935 the Sub Committee were of opinion that the manufacture of cement in the State was a feasible proposition and decided that estimates for machinery for making cement using either slag or clay or both might be obtained and that investigations regarding the quantity and the quality of raw materials available near Bhadravati may be undertaken.

Mr. M. Venkatanaranappa, Secretary to Government, Development Department, prepared a note on the subject furnishing the necessary information regarding the suitability of the raw materials available and the estimates of working costs,etc. This was considered by the Sub Committee on 26th September 1935 and they resolved that the scheme for the manufacture of cement be recommended to the Board for adoption and that the factory be located at Bhadravati. Copies of the proceedings of the meetings of the Sub Committee and a copy of the note on the manufacture of cement are sent herewith for your reference.

The above resolution of the Sub Committee has been accepted

accepted by the Board. I am sending herewith for favour of your information and necessary action copy of an extract from the proceedings of the meeting of the Board held on 4th December 1935.

I have the honour to be,
Sir,
Your most obedient servant,

K. K. Ramunny
Secretary.

(18)

BOARD OF INDUSTRIES AND COMMERCE.

PROCEEDINGS OF THE MEETING OF THE MINERAL INDUSTRIES SUB-COMMITTEE HELD ON WEDNESDAY THE 13TH FEBRUARY 1935 AT 3 P.M., IN THE OFFICE OF THE DIRECTOR OF INDUSTRIES AND COMMERCE.

Present.

1. A. M. Sen, Esq., M.Sc. (BIRM), M.I.M.E., F.G.S. (*Chairman*).
2. *Diwan Bahadur* N. N. Ayyangar, B.A., L.C.E., M.I.E. (IND.), I.S.E.
3. A. V. Ramanathan, Esq., B.A.
4. Dr. A. Nagaraja Rao, M.Sc. (CAL.), D.Sc. (BERLIN).

Mr. H. K. Ramiengar, M.A. (HONS.). (*Secretary*).

Mr. R. Sundaram Iyer wrote expressing his inability to attend the meeting.

Mr. M. Venkatanaranappa, B.A., Secretary to Government, Development Department, was present by invitation.

Mr. Sen, before opening the proceedings of the meeting, suggested that two mining representatives might be co-opted so that the Committee might have the benefit of their views on the subjects coming before them for consideration.

Mr. Ramanathan observed that the list of subjects referred to the Committee for consideration during the year 1934-35 did not include any subject directly connected with mining, and that when necessary, such representatives could be co-opted.

After some discussion the members were of opinion that Mr. Manickavelu Mudaliar might be co-opted.

The first subject considered was the manufacture of cement.

Mr. Sen referred to the investigations made some years ago in regard to the supply of clay and limestone required for the manufacture of cement. There was a proposal to start the factory for the manufacture of cement at Soldevanahalli as it had good supply of water, some buildings and electric power. If the factory was located there, the nearest place from which limestone could be obtained was Voblapur. Clay could be had from tankbeds and also from private lands.

Mr. Venkatanaranappa stated that the scheme for the manufacture of cement had been taken up by the Mysore Iron Works and estimates received from Messrs. Polysius and Krupps. A proposal was also expected from Messrs. Vickers Armstrong. It was proposed to have a plant for the manufacture of 60 tons of cement per day or 18,000 tons a year. The proposal was for manufacturing cement by using slag and limestone. Slag was practically a waste material at Bhadravati and it could be used in place of clay. Cement made of slag realised better price than cement made of clay. He thought that Bhadravati was a suitable place for starting the industry, as Bhadravati had transport and other facilities.

Diwan Bahadur N. N. Ayyangar wanted to know if it was not possible to start a factory in the neighbourhood of Voblapur where the limestone was available. Mr. Sen said that there were no facilities for water there and electric power was also not available there.

Mr. Ramanathan enquired if limestone was available near Malur and also if limestone available at Mandya could not be used. Mr. Sen replied that there were no deposits near Malur and that the deposit at Mandya was not suitable for the manufacture of cement.

Continuing, Mr. Venkatanaranappa stated, that Messrs. Polysius had already tested the raw materials available and reported on them favourably. The total cost of the machinery was estimated at about six lakhs of rupees. The data of costs of production (*vide* appendix) showed that it might be possible to prepare a ton of cement at Rs. 35. Mr. Ramanathan stated that he had received offers for the supply of machinery for making cement from Japan.

Dr. Nagaraja Rao suggested that there was a firm dealing with the machinery for manufacture of cement in Copenhagen and that they might also be consulted in the matter.

The total quantity of cement consumed in the State was about 12,000 tons a year. It was thought that there would be a steady increase in the consumption of cement.

After some discussion, the Committee came to the conclusion that the manufacture of cement in the State was a feasible proposition and that it was more profitable to make cement by using slag available at Bhadravati. In view of the need for verification of the data collected some time ago, sufficient quantities of raw materials might be sent to several firms requesting them to make cement with our materials on a semi factory scale and to send us their quotations for a plant with detailed estimates. The machinery to be used in the cement factory should be suitable for using slag as well as clay in case the supply of slag ran short. Investigations have also to be made about the quality and quantity of clay and limestone available near Bhadravati.

The next subject considered was the manufacture of ferro-chrome.

Mr. Sen gave an account of the experiments conducted till recently regarding the manufacture of ferro-chrome. It was found that the ferro-chrome produced contained a high percentage of carbon, about eight per cent, and the percentage was reduced to below four per cent after further trials. For want of facilities for reducing the percentage of carbon still further and for lack of suitable furnace and appliances the experiments were discontinued.

Mr. Venkatanaranappa observed that it was possible to prepare ferro-chrome containing very low percentage of carbon, if the smelting was done here.

Diwan Bahadur N. N. Ayyangar wanted to know if it was not possible to market the ferro-chrome containing four or five per cent of carbon.

Mr. Venkatanaranappa observed that the market was to be found outside India and that it was controlled by powerful interests. The price fetched by ferro-chrome with four or five per cent of carbon was not very high as compared with that for ferro-chrome with a low carbon content or carbon-free alloy.

After some discussion the members expressed a desire for some more information. Mr. Sen and Mr. Venkatanaranappa were requested to send a note giving all the available information and to point out the facilities required for the manufacture of ferro-chrome.

The question of making ferro-silicon was also considered. It was stated that it could be manufactured with the equipment to be obtained for making ferro-chrome and that the process adopted for the manufacture was similar. The further consideration of the subject was postponed.

The Committee then considered the manufacture of sanitary pipes and stone-ware. The members wanted to have some more time to study the subject, and it was decided that the subject might be considered at the next meeting.

Mr. Sen brought to the notice of the Committee that there was a prospect of doing good business in ornamental stones. It was found necessary to have, first, a survey conducted regarding the available resources, market, etc.

The Committee recommended that the Department of Geology should take action to conduct the survey.

Mr. Sen then said that the revision of the Mining Rules might be considered by the Committee. Mr. Ramanathan observed that the question could be taken up when Government referred the matter to the Board.

The reference received from Government regarding the offer of services made by Mr. Einern for rapid industrialisation of the country was placed before the meeting. There was no mineral industry included in the list of industries referred to in his memorandum. The Committee could not offer any views in the matter.

Dr. Nagaraja Rao suggested that marketing of magnesite might be taken up. Mr. Sen said that the area in which magnesite was available in large quantities had been taken on lease by Messrs. Tata Iron and Steel Co., Ltd., that there was no other area in which large quantities of magnesite could be had and also that the marketing of raw magnesite was a difficult proposition economically.

H. K. RAMIENGAR,
Secretary.

A. M. SEN,
Chairman.

APPENDIX.

		Rs.
Cost of 55 tons of limestone at Rs. 7 a ton.	55 × 7	375
Cost of 22½ tons of slag at Rs. 4 a ton.	22½ × 4	90
Cost of one ton of gypsum		90
Wages		30
Salaries		35
Coal, fuel		450
Power		225
Bags		300
Sundries		55
General expenses		50
Depreciation		200
		1,900
Total cost of manufacturing 60 tons of cement		1,900
Cost of one ton		31 2/3

Allowing a sum for variation of prices of raw materials, etc., the cost may be taken at Rs. 35 per ton.

WD 1432—GPB—100—8-3-35

CONFIDENTIAL.

BOARD OF INDUSTRIES AND COMMERCE.

Mineral Industries Sub-Committee.

Proceedings of the meeting held on Thursday the 26th September 1935 at 3 p.m.

Present.

1. *Diwan Bahadur* N. N. Ayyangar, B.A., L.C.E., M.I.E. (Ind.), I.S.E. (*Chairman*).
2. S. Abdul Wajid, Esq., B.A.
3. M. Venkatanaranappa, Esq., B.A.
4. B. Rama Rao, Esq., M.A., D.I.C., F.G.S.
5. Dr. B. K. Ram Prasad, M.A. (Hons.), D.Sc.
6. Mr. R. Sundaram Iyer.
7. Dr. A. Nagaraja Rao, M.Sc., D.Sc. (Ber.).
8. Mr. J. V. Everitt.

Mr. H. K. Ramiengar, M.A. (Hons.), (*Secretary*).

Absent.

1. S. G. Sastry, Esq., B.A., M.Sc. (Lond.), F.C.S. (Letter expressing his inability to attend the meeting was received).
2. Mr. V. Manickavelu Mudaliar. do

The note prepared by Mr. M. Venkatanaranappa was taken into consideration.

1. Scheme for the Manufacture of cement.

The Secretary read out the statistics of imports of cement into the State. The total quantity of cement imported into the State had gone up during the last four years from 11,227 tons in 1931-32 valued at about Rs. 7 lakhs to 15,000 tons valued at about Rs 8 lakhs in 1934-35.

As regards the estimates of capital expenditure and of working costs adopted in the note, Mr. Venkatanaranappa stated that he had a discussion on the subject with the technical representative of Messrs. Vickers Armstrong, Ltd., and that the representative had told him that the figures adopted in the note were more or less on the lines of the figures his firm had previously got and that he was satisfied with the analyses of the raw materials available here and advised that action might be taken to instal the plant of the capacity proposed. Mr. Everitt enquired whether proper investigation as regards the raw materials had been made. Mr. Venkatanaranappa replied that the raw materials had been tested by two firms and were reported to be quite suitable for the manufacture of cement. The Director of Geology said that he had also investigated the deposits of limestone at Bhadravati. After some discussion the members decided to accept the figures furnished in the note regarding the estimates of capital expenditure and of working costs.

Mr. Everitt, speaking for himself, said that the Mining Companies were interested in the proposition as there was a steady increase in their consumption of cement from 3,400 tons to 7,500 tons a year and that the companies would buy their requirements from the proposed factory if the product satisfied the British Standard Specifications for cement or was better than the British cement as most of the Indian cements were and if the price was equal to or less than the price now being paid by them. In the course of the discussion, reference was made to the arrangements made for the marketing of cement by the Indian Cement Marketing Board. Mr. Venkatanaranappa observed that there may not be any difficulty in coming to a satisfactory agreement, if necessary. Mr. Sundaram Iyer thought that it was a matter of detail which could be settled, later on, before the factory started operations.

As regards the qualities of cement manufactured by several companies in India, Mr. Everitt stated that the Indian cements generally were much above the British standard specifications and that, in his opinion, the Coimbatore cement was good, though he could not say that it was the best in the market. The Mining Companies were now paying for the Coimbatore cement Rs. 34 per ton ex-factory and that the railway freight amounted to Rs. 13-4-0 per ton. The proposed factory in Mysore had a distinct advantage over the Coimbatore factory as regards the railway freight and if the quality of cement manufactured by it was satisfactory, it was sure to capture the existing market.

The Committee then considered the place where the factory should be located. Mr. Sundaram Iyer enquired whether the factory could not be started in the Mysore District and referred to the several places where limestone was reported to be available. Mr. B. Rama Rao stated that the limestone available in those places was only nodular limestone or kankar and was not suitable for the manufacture of cement both in quality and quantity. Mr. Venkatanaranappa pointed out the advantages available at Bhadravati as regards the supplies of raw materials as slag and limestone and also the transport facilities. The members agreed that it was desirable to start the factory at Bhadravati.

Resolved that the scheme for the manufacture of cement be recommended to the Board for adoption and that the factory be located at Bhadravati as it was best suited as regards the supply of raw materials and also of transport facilities.

Mr. Everitt then enquired about the possibilities of making carbide large quantities of which were taken by the Kolar Gold Fields. Mr. Venkatanaranappa stated that the manufacture of carbide was under consideration of the Iron works some years ago but it could not be pursued due to the absence of electric power. As the power was made available, the manufacture of carbide was a feasible proposition and the Committee decided that this question might be gone into in detail and suitable action taken for undertaking the manufacture of carbide.

2. Manufacture of ferro-chrome.

Manufacture of ferro-chrome was the next subject taken up for consideration. Mr. Venkatanaranappa stated that he had ordered for a pamphlet furnishing some information, from the Imperial Institute, London, regarding the conditions now prevailing with regard to the World's supply and demand for chrome ore, statistics of prices, production and marketing, etc. The Committee thought that it was better to await the receipt of this brochure.

Diwan Bahadur N. N. Ayyangar, on behalf of the Committee, thanked Mr. Everitt for the trouble he had taken in attending the meeting and also for his valuable suggestions as regards the manufacture of cement and also of carbide. Mr. Everitt thanked the Chairman and said that he was interested in the development of Indian Industries and that the success of any new enterprise would be beneficial to all.

H. K. RAMIENGAR,
Secretary.

N. N. AYYANGAR,
Chairman.

WD 648—GPB—100—22-10-35.

NOTE ON THE MANUFACTURE OF CEMENT IN THE STATE.

Portland cement is now being manufactured in India on a very large scale and till the Cement Marketing Board was established, there was considerable competition among the manufacturers; but even now the Coimbatore Factory which was started recently is the only concern in the south of India. Until recently cement used in Mysore was being imported mainly from Shahabad but latterly Coimbatore cement is also coming in. Prices have been reduced from about Rs. 65 a ton to about Rs. 48 a ton f. o. r. any Station in the Mysore State and as a result of the rationalisation referred to in the papers recently, there might be a further reduction in price.

Under these circumstances, one would think that there is very little room for the expansion of cement manufacture in India but there are a number of special considerations in the case of Mysore which justify the erection of a small plant.

The manufacture of cement in Mysore has been under consideration for some years past. At first it was intended to make use of the clay deposits and buildings available near Soldevanahalli and obtain limestone from Voblapur. The clay and limestone available were examined by the expert from Shahabad and pronounced to be satisfactory, but this scheme was not pursued as it involved heavy cost of transport. Considerable investigation has also been made in regard to the use of Blast Furnace slag at Bhadravati in the manufacture of cement, making use of the limestone available at Gangur or Voblapur. The use of Voblapur limestone involves heavy transport charges and the recent reduction in price of cement and the necessity to keep down the cost of manufacture as low as possible makes it necessary that a deposit near Bhadravati should be considered. Mr. B. Rama Rao has recently examined the limestone deposits near Bhadigund about one to two miles from the Bhadravati-Joldhal Tramway and is of opinion that there is an extensive deposit which will last for a long time even if it is used both for the manufacture of cement on the scale now proposed and as a flux in the Blast Furnace. A small portion of the slag produced by the Blast Furnace is recharged, but about 15 tons are at present a waste material. Surrounding Bhadravati there are a large number of tanks where deposits of clay suitable for the manufacture of cement is available. Water, power and engineering services are also available so that Bhadravati forms an ideal centre for the manufacture of cement.

The slag available at Bhadravati will be sufficient for a plant producing about 60 tons of cement a day or about 18,000 tons a year. At present, about 12,000 tons are being consumed in Mysore, the bulk of the consumption being in the Kolar Gold Fields and by the public works undertaken by Government in the Cities of Bangalore and Mysore. The demand is bound to grow especially with the reduction in prices and a plant with the capacity of 60 tons a day seems suitable for Mysore. It is also considered to be the smallest economical unit.

As already stated, Blast Furnace slag is a waste material and even if the quantity now used in the furnace is replaced by siliceous ore and limestone, the extra expenditure involved will, at present prices, be about Rs. 20 a day.

Limestone and clay are both being used in the Iron Works. The cost of limestone delivered at Bhadravati is now calculated at Rs. 4 a ton but this is based on a number of assumptions, one of which is an average uniform rate of transport for wood and ore for any lead on the tramways. If the cost of winning limestone and its transport is separately calculated, it will be found that the cost even at present is not more than Rs. 3; with the increase in quantity mined and the extension of tramways, the cost may be reduced to less than Rs. 2-8-0 a ton.

The Works are at present paying Re. 1-0-0 to Re. 1-4-0 a ton for clay and there may not be much change in this rate.

The Electrical Department have agreed to supply power to the Mysore Iron Works at 0·55 anna a unit during the day and 0·35 anna a unit at night and the same rates will apply to the cement plant.

Fuel will be costly as wood is not available and coal has to be brought from outside. On the basis of the rates paid at present, Rs. 20 a ton has been assumed in the preparation of the estimate of manufacturing cost.

Messrs. Polysius, Aktiengessellschaft, Dessau, and Krupp India, Limited, Bombay, are satisfied that the raw materials are suitable and cement can be manufactured at competitive rates. Messrs. F. L. Smidth, Copenhagen, have stated that the limestone is good and they have called for some more information about the slag.

The capital and manufacturing costs have been examined in very great detail in consultation with the following firms :—

(1) Messrs. Polysius. Aktiengessellschaft, Dessau.
(2) „ Krupp India, Limited, Bombay.

On the information furnished by them and the knowledge of local conditions, the following estimates have been prepared :—

I. Capital Cost.

(ITEMS INCLUDE COST OF ERECTION).

		Rs.
Tramway extension for limestone quarry	...	30,000
Plant track	...	10,000
Mechanical equipment	...	3,60,000
Electrical equipment	...	40,000
Laboratory equipment and workshop	...	20,000
Buildings, foundation sites, etc.	...	50,000
Miscellaneous and contingencies	...	40,000
Total	...	5,50,000
Working capital 9,000 × Rs. 25	...	2,25,000

II. Cost of Manufacture.

		Rs.
Cost of 55 tons of limestone at Rs. 2-8-0 a ton	...	138
Cost of 22½ tons of slag	...	20
Cost of one ton of gypsum	...	90
Wages	...	30
Salaries	...	35
Coal (fuel)	...	390
Power	...	225
Bags	...	300
Sundries	...	55
General expenses	...	50
Depreciation at 8 per cent	...	146
Interest on working capital at 5 per cent	...	38
Cost of manufacturing 60 tons	... Total Rs.	1,517
	or say	1,500
Cost of one ton of cement	...	*25*

It is generally believed that the lowest cost of manufacture in cement factories in India is a little under Rs. 20 a ton but it is not known whether this includes depreciation and cost of bagging but even supposing it does, the Bhadravati Plant can compete with them in the State of Mysore and the country surrounding it, on account of the advantage of freight. The freight from Shahabad or Coimbatore to Bangalore is about Rs. 17-8-0 and Rs. 15-8-0 respectively a ton. Bhadravati may secure a special freight rate of about Rs. 3 a ton but even based on the special rates already allowed for cement by the Madras and Southern Mahratta Railway Company, it may not exceed Rs. 8 a ton. There is thus a decided freight advantage of about Rs. 7 a ton which compensates for the additional cost of manufacture.

Should the cement combine reduce the prices to the lowest possible extent, we may assume a selling rate of Rs. 35 a ton at Bangalore. Even this will allow a margin of Rs. 3 a ton or Rs. 54,000 a year which is nearly 10 per cent on the capital. But ordinarily the profits should be more.

Besides, the scheme will give employment to about 300 labourers and a few educated young men in the factory and lime quarries. On the basis of the freight assumed, our Railway revenue will reincrease by about a lakh of rupees without much additional expenditure, and the revenue of the Electrical Department by about Rs. 67,500.

It must also be remembered that the last word has not been said on prices and if it is decided to proceed with the scheme, competitive quotations may be obtained and it may be possible to further reduce the capital expenditure.

From all points of view, it is worth while taking up the manufacture of cement at Bhadravati.

M. VENKATANARANAPPA,
Secretary to Government,
Development Department.

W D 254—GPB—100—10-8-35

CONFIDENTIAL.

26

BOARD OF INDUSTRIES AND COMMERCE.

PROCEEDINGS OF THE FOURTH MEETING OF THE BOARD OF INDUSTRIES AND COMMERCE HELD AT 2 P.M. ON WEDNESDAY THE 4TH DECEMBER 1935, AT THE LEGISLATIVE COUNCIL HALL, PUBLIC OFFICES, BANGALORE.

Present.

N. Madhava Rau, Esq., B.A., B.L.,
Second Member of Council. (*Chairman.*)

MEMBERS.

1. Dr. E. P. Metcalfe, D.Sc. (Lond.), F. Inst. P.,
Vice-Chancellor, Mysore University.
2. S. Abdul Wajid, Esq., B.A.,
Director of Industries and Commerce.
3. Dr. B. Narasimha Iyengar, B.A., Ph.D.,
Director of Agriculture.
4. H. D. Sinclair, Esq., V. D.,
Agent, Mysore Railways.
5. *Rajasevasakta* Mr. C. M. Cariapa,
Chief Electrical Engineer.
6. M. Machaya, Esq., B.A. (Oxon).,
Chief Conservator of Forests.
7. G. M. Mehkri, Esq., B.A., LL.B.,
Registrar of Co-operative Societies.
8. B. Rama Rao, Esq., M.A., D.I.C., F.G.S.,
Director of Geology.
9. M. Venkatanaranappa, Esq., B.A.,
Secretary to Government, Development Department.
10. B. Krishnaswami Iyengar, Esq., L.C.E., M.I.E. (Ind.),
Principal, College of Engineering.
11. M. S. Ramachandra Rao, Esq., B.A.,
General Manager, Mysore Iron and Steel Works.
12. B. G. Appadorai Mudaliar, Esq., B.A., B.Sc., A.M.I.M.E.,
Industrial Engineer.
13. *Rajasabhabhushana* Sir C. V. Raman, KT., M.A., Ph.D., D.Sc., LL.D., F.R.S., N.L.
14. *Rajasabhabhushana Diwan Bahadur* K. R. Srinivasa Iyengar, M.A.
15. *Rajasevasakta* Mr. S. Hiriannaiya, M.A., B.L.
16. *Rajacharitavisarada Rao Sahib* C. Hayavadana Rao, B.A., B.L.
17. *Rao Bahadur* B. K. Garudachar.
18. *Dharmapravartha* Mr. M. L. Nagappa Setty.
19. Mr. T. Ramachandra.
20. „ R. Sundaram Iyer.
21. „ D. N. Sirur.
22. „ M. Ramachandra Rao Sindhia.
23. „ B. Abdul Rahmon, B.A.
24. „ K. Srikantaiya.
„ H. K. Ramiengar, M.A. (Hons.) (*Secretary.*)

Absent.

1. The Deputy Director of Industries.
2. Sir Martin Forster, KT., F.R.S.
3. P. W. O'Brien, Esq.
4. T. Chandranna, Esq. (Letter expressing his inability to attend the meeting was received).

Before the business on the agenda commenced, *Rajasabhabhushana Diwan Bahadur* K. R. Srinivasa Iyengar felicitated the Chairman on his elevation as the Member of Council and offered him a hearty welcome.

Dharmapravartha Mr. M. L. Nagappa Setty associated himself with what the previous speaker said.

The Chairman thanked *Rajasabhabhushana Diwan Bahadur* K. R. Srinivasa Iyengar for the kind sentiments expressed by him on behalf of the members of the Board.

Before the first subject on the agenda was taken up for consideration, the Chairman referred to the last item in the agenda and enquired if the members had any subjects to be discussed at the meeting. They said they had none.

1. Establishment of a Coffee Curing Works at Chikmagalur.

The Secretary read out the recommendations of the Trade, Commerce and Labour Sub-Committee to the effect that the scheme for establishing Coffee Curing Works at Chikmagalur might be adopted, if the planters subscribing to the share capital of the company gave an undertaking to send, for a period of three years, a definite quantity of coffee grown by them, to the proposed works, for curing at the rates shown in the estimates.

Mr. R. Sundaram Iyer observed that it appeared to him that nobody was seriously interested in starting the Curing Works. Some of the planters were not in favour of starting it at Chikmagalur. Even *Dharmapravartha* Mr. M. L. Nagappa Setty, one of the influential coffee planters, had his own doubts as to the success of the proposed factory. *Dharmapravartha* Mr. M. L. Nagappa Setty pointed out that he was not against the scheme and that the concern would be a success if it was started with adequate capital. He stated that the successful working of the factory would help the coffee planters in several directions.

Rajasabhabhushana Diwan Bahadur K. R. Srinivasa Iyengar said that it was necessary for the Curing Works to finance the planters and suggested that the establishment of a Coffee Bank besides the Curing Works would meet the requirements of the situation and enquired why the Sub-Committee did not consider this aspect of the question.

Mr. M. Ramachandra Rao Sindhia stated that the question of the Curing Works providing financial facilities to the planters arose only when it failed to secure sufficient supplies for curing from the planters who did not require advances and that, in his opinion, it was possible for it to secure sufficient coffee from small planters alone.

Rao Bahadur B. K. Garudachar enquired whether the small planters were in a position to send their coffee to the proposed local concern. The curing firms on the Coast had made heavy advances to the planters against crops and built up an organisation for the collection of crops from the local planters. If the Curing Works was guaranteed a supply of 1,000 to 1,500 tons of coffee for curing at the rates shown in the estimates, it might be sure of working successfully. His suggestion was that the figures of receipts and expenses shown in the estimates should be revised. As the coffee planters who had been consulted in this behalf did not support the scheme and as there was a serious fall in price of coffee, the whole scheme required a thorough investigation before any action was taken on it.

Rajasevasakta Mr. S. Hiriannaiya referred to the difference of opinion existing among the members of the Sub-Committee as regards the proposed factory. It was not advisable to proceed further with the scheme, if it was the idea of the planters that the Government should render them financial assistance to the extent they required. He thought that the question was still in an incomplete stage and suggested the need for making further investigations.

Mr. S. Abdul Wajid said that the chief points to be considered were whether sufficient quantity of coffee for curing could be secured from the local planters without making them advances and whether they would agree to pay the curing charges at the rates shown in the estimates. If the planters agreed to give an undertaking to the proposed company, the scheme might be recommended for adoption.

Dr. E. P. Metcalfe observed that the Coastal firms were advancing money to the planters at high rates of interest and were also charging a commission for

curing and selling the coffee. He thought that it would help the planters if an organisation for financing the coffee planters, and for curing and marketing the coffee raised in the State was brought into existence. It was necessary to free the coffee industry from the clutches of the Coastal firms.

Rajasabhabhushana Sir C. V. Raman referred to the prospectus issued by the Coimbatore Coffee Works and observed that with a capital of one lakh of rupees, the company expected to realise a profit of 15 per cent. The planters there did not look for any outside assistance. He enquired why the Mysore coffee planters did not proceed on the same lines. He referred to the establishment of a coffee curing works at Mysore and wanted to know if it could secure sufficient coffee for curing.

The Chairman said that he understood that the case of the Curing Works at Mysore started by Mr. Morgan was quite different. He had his own coffee to cure and dispose of and did not depend upon others to send their coffee for curing.

Dharmapravartha Mr. M. L. Nagappa Setty agreed with the views expressed by Dr. E. P. Metcalfe regarding the organisation required for financing the planters and for curing the coffee grown here and for selling the same to the best advantage and stated that a large amount of capital was required for starting such an organisation. It appeared to him that it was better if the entire question was further investigated.

Rajasabhabhushana Diwan Bahadur K. R. Srinivasa Iyengar also urged that the subject should be referred back for further investigation as regards the need for rendering financial assistance to the planters and the agency to be set up for rendering such assistance and if a Bank was proposed to be established for the purpose, the nature and extent of the assistance it required from Government.

The sense of the meeting was that the scheme might be referred back to the Sub-Committee for further investigation in view of the observations made by the members during the discussion.

2. Scheme for the manufacture of edge-tools and implements.

Rajasevasakta Mr. S. Hiriannaiya stated that the scheme for starting a factory for the manufacture of edge-tools and implements was considered by the Cottage Industries Sub-Committee and the members called for information regarding the working of the factory started by Mr. C. K. Menon at Shoranur, the existing demand in the State for the implements and tools, the availability of steel scrap locally, etc. He stated that the information furnished on these points was not definite.

Rajasabhabhushana Diwan Bahadur K. R. Srinivasa Iyengar observed that the recommendation of the Sub-Committee was not quite clear and that the information furnished to the members was quite inadequate. He wanted to know at whose instance the scheme was taken up by the Board for consideration and why it was referred to the Cottage Industries Sub-Committee.

The Chairman called upon the Industrial Engineer to explain to the members the details of the scheme.

Mr. B. G. Appadorai Mudaliar stated that Mr. C. K. Menon was a metallurgist with considerable experience and had established a factory at Shoranur with a capital of about Rs. 50,000 and its annual turnover was about Rs. 25,000. Mr. Menon proposed to float a company with a capital of Rs. 2,00,000 for starting a similar factory at Bangalore. The estimated cost of the plant, machinery and buildings was about a lakh of rupees and Rs. 50,000 were required for working expenses. The factory was intended to manufacture agricultural implements and edge-tools valued at about Rs. 2,00,000 a year. The scheme provided for a return of 25 per cent on the capital invested. The whole of the output could find a ready sale in Bangalore. He was convinced that the scheme was a profitable one. The factory could expand the scale of operations later on but none of the units now proposed to be installed would become superfluous when the plant was expanded.

Rajasabhabhushana Sir C. V. Raman and *Rao Bahadur* B. K. Garudachar enquired why the factory should not be started at Bhadravati as auxiliary to the Iron and Steel Works.

Mr. Venkatanaranappa stated that the proposition was sound and that there was scope for a factory for the manufacture of implements in the State. He gave

a brief account of the manufacture of agricultural implements by the Tatas. He suggested that the scale of operations proposed in the scheme should be enlarged.

Mr. B. G. Appadorai Mudaliar said that Mr. C. K. Menon had investigated the question of locating the factory at Bhadravati. He preferred Bangalore as it was a distributing centre and afforded him all the facilities he required. He could easily get here skilled labour from Malabar to train local labour.

The Chairman enquired if it was not their idea to undertake the manufacture of these goods on a mass scale by the use of machinery.

Mr. B. G. Appadorai Mudaliar stated that the plant proposed to be installed was semi-automatic to facilitate the production of goods on a mass scale. Mr. S. Abdul Wajid explained that though the machinery was used to a large extent in the manufacture of agricultural implements, highly skilled manual labour was required for the manufacture of edge-tools such as chisels, etc., as it was proposed to make both agricultural implements and edge-tools. Even in England, a certain amount of manual labour was employed in such industries. As compared with England, the cost of manual labour in India was cheaper and they had a distinct advantage in this respect over the foreign countries from which such articles are now being imported.

Rajasabhabhushana Sir C. V. Raman stated that as the Mysore Iron and Steel Works was about to begin the manufacture of steel, it was necessary to see whether the proposed factory could not be started on a large scale at Bhadravati. *Rajacharithavisarada Rao Sahib* C. Hayavadana Rao remarked that the question of undertaking the manufacture of these goods had been under consideration of the Iron Works several years ago. He preferred to have the proposed factory started at Bhadravati on a large scale as otherwise it would prove a failure. Mr. R. Sundaram Iyer also supported the previous speakers.

Resolved that in view of the possibilities of starting a factory for the manufacture of agricultural implements and tools as an adjunct to the Mysore Iron and Steel Works, the question might be further investigated and a revised scheme drawn up.

3. Draft Bill providing for the grant of maternity benefit to women working in factories.

The Trade, Commerce and Labour Sub-Committee had resolved that the draft Bill received from Government might be passed into law with certain modifications suggested by them.

Mr. M. Ramachandra Rao Sindhia said that the Sub-Committee had considered the draft Bill carefully and that their recommendation was unanimous and pointed out the desirability of introducing the legislation in the State. He was supported by Mr. D. N. Sirur and *Rao Bahadur* B. K. Garudachar.

The Chairman referred to the provisions made for the grant of maternity benefit to the women employed on daily wages in the several concerns under the control of the Department of Industries and Commerce.

Mr. T. Ramachandra requested the Chairman to recommend to Government that the Bill in question which had been introduced by private members might be taken up and proceeded further as a Government measure. The sense of the meeting was that his request might be complied with.

It was resolved that the draft Bill with modifications suggested by the Sub-Committee might be recommended to Government to be passed into law and that the Bill might be proceeded with as a Government measure.

4. Legislation for the registration of Trade Unions.

The consideration of this subject was deferred.

5. Utilisation of the spare time of the agriculturists for increasing their income by pursuing subsidiary occupations.

The Board accepted the views of the Cottage Industries Sub-Committee that the District Boards might be requested to take necessary action on the lines suggested by the Industrial Engineer in his note for providing subsidiary occupations to the agriculturists.

6. Scheme for the manufacture of electric bulbs by Mr. P. V. K Murthy.

The Electrical Materials Sub-Committee had recommended that it was desirable to induce private enterprise to take up the manufacture of electric bulbs and that in view of the difficulties to be overcome in the initial stages, Government should offer to the proposed company the guarantee of purchase of the requirements of bulbs of all the Government Departments, for a period of two years, at the Ring prices and that the company should replace, free of cost, the spent-up bulbs for an additional payment of 30 per cent of the value of the bulbs purchased.

Rajasabhabhushana Sir C. V. Raman stated that he had presided over the meeting of the Sub-Committee when this subject was discussed and that, in his opinion, the scheme submitted by Mr. P. V. K. Murthy was in a very nebulous condition. The recommendation of a Sub-Committee on the scheme submitted by Mr. V. R. Cowsik was that the Government might purchase their requirements of bulbs from the proposed concern provided the quality of the bulbs was satisfactory and the prices were reasonable. The same concession with a slight modification was now recommended to be offered to a private enterprise that would take up the scheme for the manufacture of bulbs now under consideration. If a factory was started for introducing a new industry, it was necessary that it should be offered this concession. Though he thought the whole scheme to be hypothetical, still he requested that the recommendations of the Sub-Committee might be accepted and sent to Government for such further action as they considered necessary.

Rajasevasakta Mr. C. M. Cariapa pointed out that the purchase of bulbs at the Ring prices was a complicated question as those prices were subject to sudden fluctuations. He saw no objection to offer the proposed company the guarantee of the purchase of bulbs by Government at the current prices and the payment of a small amount towards the cost of replacing the spent-up bulbs.

After some discussion, it was resolved that the recommendation of the Sub-Committee might be accepted.

7. Scheme for the manufacture of cement.

The Chairman stated that the Mineral Industries Sub-Committee had recommended that the scheme for the manufacture of cement might be adopted and requested Mr. Venkatanaranappa to explain the details of the scheme.

Mr. Venkatanaranappa stated that printed copies of the note furnishing all the information available on the subject had been circulated amongst the members and that if they indicated the points on which they desired further information he would furnish the same.

Mr. B. Krishnaswami Iyengar observed that the scheme under consideration provided for an output of 18,000 tons a year and that it was desirable to provide for a larger output in view of the steady rise in the demand for cement in recent years. The use of slag avilable at Bhadravati stood in the way of further extensions as the supply of slag was limited. He said that it was desirable to use both clay and slag. He then referred to the processes of manufacture in vogue and enquired whether the wet process was proposed to be adopted at Bhadravati. This enquiry was answered in the affirmative by Mr. Venkatanaranappa.

Mr. B. Rama Rao stated that the limestone deposits round about Bhadravati were sufficient to meet the requirements of the factory for 30 to 40 years. There were also clay deposits suitable for the manufacture of cement within a distance of 4 or 5 miles.

Mr. Venkatanaranappa stated that the estimate of receipts and costs furnished in the note was based on the present market price of cement and the rates for raw materials and wages obtaining at Bhadravati. The capacity of the proposed plant would meet the present requirements of the State and it was not advisable to increase the output as the surplus cement after meeting the local demand would have to be disposed of in outside markets in competition with other manufacturers. He said that it was also possible to secure further reductions in the working costs which would result in larger profits.

Rajasabhabhushana Diwan Bahadur K. R. Srinivasa Iyengar wanted to know whether the proposed factory would be started by Government or by private enterprise. Mr. Venkatanaranappa replied that it was proposed to start the works at Bhadravati as an adjunct to the Iron Works with a view to secure a saving in the cost of management and supervision, sales expenses, etc.

The Board accepted the recommendation of the Mineral Industries Sub-Committee.

8. Amendment to Rule 5 of the Rules framed under the Weights and Measures Regulation.

The Trade, Commerce and Labour Sub-Committee had recommended that Rule 5 of the Rules framed under the Weights and Measures Regulation might be amended with a view to provide for the use of only seamless measures as the ordinary seer measures soldered or rivetted at the bottom and sides lent themselves to manipulation for dishonest and fraudulent purposes.

Mr. K. Srikantaiya stated that it was desirable to amend the rule and that the Grain Merchants' Association were agreeable to the proposed amendment. Mr. S. Abdul Wajid also stated that the amendment was necessary.

The Board accepted the resolution of the Sub-Committee.

9. Adoption of a maund of 28 pounds for weighing all commodities.

The Trade, Commerce and Labour Sub-Committee had recommended the adoption of a maund of 28 pounds (avoirdupois) for weighing all commodities.

Mr. K. Srikantaiya pointed out the advantages of adopting this unit as it would put an end to the confusion caused by the use of maunds of different weights. Mr. M. Ramachandra Rao Sindhia was also of the same opinion. *Rajasevasakta* Mr. S. Hiriannaiya said that the time had come for prescribing the use of a maund of 28 pounds for weighing all commodities.

Rajasabhabhushana Sir C. V. Raman enquired whether the proposed maund would be recognised as the Mysore standard maund. The Chairman remarked that this required consideration as there was already the standard maund (960 tolas) prescribed in the Rules under the Weights and Measures Regulation.

The Agent, Mysore Railways, said that he saw no objection to introduce the maund of 28 pounds. *Dharmapravartha* Mr. M. L. Nagappa Setty stated that the use of a maund of 28 pounds would facilitate calculations as it was a quarter of a hundred-weight.

The Board resolved to accept the recommendation of the Sub-Committee.

10. Scheme for the manufacture of bakelite articles.

Rajasevasakta Mr. C. M. Cariapa stated that the scheme submitted by Mr. Maurice Frydman for the manufacture of bakelite articles had been considered by the Electrical Materials Sub-Committee and that they were not in favour of recommending the grant of any assistance for the purpose.

Rajasabhabhushana Sir C. V. Raman stated that no action was required for the present as Mr. Maurice Frydman was making some bakelite articles in connection with the manufacture of electrical goods under the control of the Electrical Department.

The Board decided to accept the recommendations of the Sub-Committee.

11. Manufacture of accumulators.

In this connection, the Chairman referred to the application received from Mr. A. Bose, Managing Director of the General Accumulators Manufacturing Company, Ltd., Bombay, requesting for the assistance of Government for improving the business organised by him for the manufacture of batteries, accumulators, train lighting sets, etc., and said that Government had decided to grant him certain concessions, namely, rent-free accommodation in the premises of the old Distillery Buildings for three years, supply of power at concessional rates as provided for in the rules, assistance for the acquisition of lands when necessary, etc.

Dr. E. P. Metcalfe stated that the industry in question was classed among the dangerous trades and that it was necessary to adopt suitable precautions to safeguard the health of the operatives engaged in the industry.

The Chairman pointed out that suitable action could be taken under the Factories Regulation to safeguard the health of the employees.

12. Improvements in the handloom industry—supply of yarn to hand-loom weavers.

The Cottage Industries Sub-Committee had recommended that, as an experimental measure, arrangements might be made in one or two places for the supply of yarn to the weavers through the agency of the existing staff of the Department of Industries and Commerce.

Mr. B. G. Appadorai Mudaliar explained that the arrangement in question was proposed as an experimental measure. If yarn was supplied to the weavers against cash at the prevailing market rates they could save the charges of the middlemen. This would result in a corresponding increase in their earnings.

Rao Bahadur B. K. Garudachar said that the arrangement proposed would not succeed as the weavers would never pay cash against the yarn they purchased. If the Government were prepared to supply yarn on credit, the weavers would avail themselves of the help offered by the Department.

Mr. D. N. Sirur pointed out that the arrangement proposed was not feasible as the mills could not sell yarn to the retail dealers. He did not agree that the middlemen were responsible for the plight of the weavers, which, in his opinion, was due to the imports of foreign cloths at very low rates.

Mr. T. Ramachandra stated that it would help the weavers if they were supplied with dyed yarn and sized warps.

Rajasabhabhushana Diwan Bahadur K. R. Srinivasa Iyengar remarked that the arrangement proposed might be tried as it was purely an experimental measure and did not involve any extra cost.

The Director of Industries and Commerce was requested to take suitable action in the matter.

13. Coir-rope making as a Cottage Industry.

The Board recorded the resolution of the Sub-Committee recommending that a grant of Rs. 150 might be sanctioned by the Director of Industries and Commerce for introducing a willowing machine and spinning and twisting wheels for improving the processes in vogue and for investigating the possibility of introducing coir-rope making as a Cottage Industry.

14. Investigations for the introduction of the manufacture of lacquered articles as a Cottage Industry.

Rajasabhabhushana Diwan Bahadur K. R. Srinivasa Iyengar stated that the Cottage Industries Sub-Committee had recommended that investigations should be made for introducing the manufacture of lacquered articles and toys as a Cottage Industry in suitable villages in Channapatna, Maddur and Closepet Taluks and enquired if further action was being taken in the matter.

Mr. S. Abdul Wajid stated that the artisans engaged in the industry at Channapatna were in need of seasoned wood, good designs, improved tools and appliances and marketing facilities and that the Department was making investigations with a view to find out the facilities that could be provided to the artisans for improving the industry.

The Board recorded the resolution of the Sub-Committee.

The meeting terminated with a vote of thanks to the Chairman proposed by *Rajasabhabhushana* Sir C. V. Raman.

H. K RAMIENGAR,
Secretary.

N. MADHAVA RAU,
Chairman.

W D 1110—GPB—100—2-1-36

34

Government of His Highness the Maharaja of Mysore.

GENERAL AND REVENUE DEPARTMENTS

1/2.4.36

Cement factory

Sanctioning the scheme for the starting of a ——— at Bhadravati

G. O. No. ~~G~~ D-6012-15/Dx 44-34-9 DATED 2-4-36

May this be

i. printed? yes

ii. treated as a standing order? ~~No~~ yes

iii. published in the Gazette English Part? No

iv. translated? ~~No~~ yes.

v. placed at the disposal of the press? No

vi. published in the Gazette Kannada Part? yes

Subs for appl
Ms 9/4
2 14/36

Ms.
2/4/36

PROCEEDINGS OF THE GOVERNMENT OF H.H.THE MAHARAJA OF MYSORE.

***

Vide separate docket sheet

READ:-

Letter No.572 dated 29th December 1935 from the Secretary, Board of Industries and Commerce, forwarding a resolution of the Board accepting the recommendation of the Sub-Committee, that the scheme for the manufacture of cement be adopted and that the factory be located at Bhadravati.

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ORDER NO:

DATED, BANGALORE, 1936.

The Board of Industries and Commerce have examined the scheme for the manufacture of cement from all aspects and recommended that a plant of the capacity of about 60 tons a day be installed at Bhadravati by Government and work~~ed~~ in association with the Mysore Iron and Steel Works.

Bhadravati has special facilities for the location of the Cement factory, as all the raw materials are available in close vicinity and the Iron and Steel Works can ~~easily~~ provide water, laboratory, engineering and workshop services at ~~very little~~ a small additional cost. Limestone, the most important raw material, is available at the quarries near Gangur where it is being mined by the Iron and Steel Works for use as flux in the blast furnace. The Department

Department of Geology has made a detailed investigation and have found that there is an extensive deposit which will satisfy for a long time the requirements of the Cement Factory and the Iron and Steel plant. The slag produced by the blast furnace is at present practically a waste material and besides suitable clay is also available in large quantities in the tanks near by. The capacity of the plant has been based on the quantity of slag available as also the demand for cement in the State for some years to come.

The bulk of the demand is from the Kolar Gold Fields and the public works undertaken by Government and it is anticipated that satisfactory arrangements can be made with the Mining Companies for the supply of their requirements by the proposed cement factory. ~~Practically the entire output~~ will easily be sold in the State.

Proposals have been received from various manufacturers of plant and machinery and other necessary preliminary investigations have also been made. On the basis of these enquiries, it has been estimated that the capital cost of the factory will be Rs.5.5 lakhs and that the cost of manufacture of one ton of cement including depreciation and interest on working capital will be about Rs.25/- a ton and that this scheme will prove remunerative even

should

should there be a fall in the price of cement.

Government are pleased to accord their sanction to the establishment of a cement factory at Bhadravati as an adjunct of the Mysore Iron and Steel Works at a capital cost of Rs.5.5.lakhs and direct that ~~the~~ necessary provision be made therefor in the ~~budget estimates~~ for the ~~years 1935-36 and~~ 1936-37. It is expected that the expenditure during the current year will be Rs. ~~1.5~~ lakhs and the balance will be required during next year.

Secretary to Government,
Development Department.

To

The Director of Industries and Commerce in Mysore.

The Secretary, Board of Management, Iron & Steel Works, Bhadravati, Mysore.

The Director of Geology in Mysore.

17 18 e

D. 6012-15 — Jk. 44-34-9

PROCEEDINGS OF THE GOVERNMENT OF H.H. THE MAHARAJA OF MYSORE.

Read.-

Letter No. 572 dated 29th December 1935 from theSecretary, Boardof Industries and Commerce, forwarding a resolution of the Board accepting the recommendation of the Sub-Committee, that the scheme for the manufacture of cement be adopted and that the factory be located at Bhadravati.

Order No. D. 6012-15/Jk. 44-34-9

Dated, Bangalore, 2-4 1936.

TheBoard of Industries and Commerce have examined the scheme for the manufacture of cement from all aspects and recommended that a plant of the capacity of about 60 tons a day be installed at Bhadravati by Government and worked in association with the Mysore Iron and Steel Works.

Bhadravati has special facilities for the location of a Cement Factory, as all the raw materials are available in close vicinity, and the Iron and Steel Works can provide water, laboratory, engineering and workshop services at a small additional cost. Limestone, the most important raw material, is available at the quarries near Gangur where it is being mined by the Iron and Steel Works for use as flux in the blast furnace. The Department of Geology has made a detailed investigation and found that there is an extensive deposit which will satisfy for a long time the requirements of both theCement Factory and the Iron and Steel

Steel plant. The slag produced by the blast furnace is at present practically a waste material and suitable clay is also available, if found necessary, in large quantities in the tanks near by.

The capacity of the plant hasbeen based on the quanity of slag available as also on the demand for cement in the State for some years to come. The bulk of the demand is from the Kolar Gold Field and the public works undertaken by Government in connection with. It is anticipated that satisfactory arrangements can be made with the Mining Companies for the supply of their requirements by the proposed Cement Factory.

Proposals have been received from various manufacturers of plant and machinery, and other necessary preliminary investigations have also been made. On the basis of these enquiries, it is estimated that the capital cost of the factory will be Rs.5.5 lakhs and that the cost of manufacture of one ton of cement, including depreciation and interest on working capital will be about Rs. 25/- a ton, and that the scheme will prove remunerative even should there be a fall in the price of Cement.

Government are pleased to accord their sanction to the establishment of a Cement Factory at Bhadravati as an adjunct of the Mysore Iron and Steel Works at a capital cost of Rs. 5.5 lakhs. It is expected that the expenditure during the current year will be 1 lakh. An additional demand for this sum will be placed before the Legislative Council at its next session.

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The balance of Rs. 4.5 lakhs will be provided for under Capital grants in the budget for next year.

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MW.

Secretary to Government,
Development Department.

To

The Director of Industries and Commerce
in Mysore.

" Secretary, Boardof Management,
Mysore Iron andSteel Works,
Bhadravati.

" Director of Geology in Mysore.

" Controller of Printing & Stationery.

Als.1/4.

PROCEEDINGS OF THE GOVERNMENT OF HIS HIGHNESS
THE MAHARAJA OF MYSORE.

Read :-

Letter No. 572 dated the 29th December 1935 from the Secretary, Board of Industries and Commerce, forwarding a resolution of the Board of accepting the recommendation of the Sub Committee, that the scheme for the manufacture of cement be adopted and that the factory be located at Bhadravati.

Order No. P. 6012-15/35-44-34-9.
Dated, Bangalore, 2nd April 1936.

The Board of Industries and Commerce have examined the scheme for the manufacture of cement from all aspects and recommended that a plant of the capacity of about 60 tons a day be installed at Bhadravati by Government and worked in association with the Mysore Iron and Steel Works.

Bhadravati has special facilities for the location of a Cement Factory, as all the raw materials are available in close vicinity, and the Iron and Steel Works can provide water, laboratory, engineering and workshop services at a small additional cost. Limestone, the most important raw material, is available at the quarries near Sangar where it is being mined by the Iron and Steel Works for use as flux in the blast furnace. The Department of Geology has made a detailed investigation and found that there is an extensive deposit which will satisfy for a long time the requirements of both the Cement Factory and the Iron and Steel Plant. The slag produced by the blast furnace is at present practically a waste material and suitable clay is also available, if found necessary, in large quantities in the tanks near by.

The capacity of the plant has been based on the

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the quantity of slag available as also on the demand for cement in the State for some years to come. The bulk of the demand is from the Kolar Gold Field and in connection with the public works undertaken by Government. It is anticipated that satisfactory arrangements can be made with the Mining Companies for the supply of their requirements by the proposed Cement Factory.

Proposals have been received from various manufacturers of plant and machinery, and other necessary preliminary investigations have also been made. On the basis of these enquiries, it is estimated that the capital cost of the factory will be Rs. 5.5 lakhs and that the cost of manufacture of one ton of cement, including depreciation and interest on working capital will be about Rs. 25/- a ton, and that the scheme will prove remunerative even should there be a fall in the price of cement.

Government are pleased to accord their sanction to the establishment of a Cement Factory at Bhadravati as an adjunct of the Mysore Iron and Steel Works at a capital cost of Rs. 5.5 lakhs. It is expected that the expenditure during the current year will be 1 lakh. An additional demand for this sum will be placed before the Legislative Council at its next Session. The balance of Rs. 4.5 lakhs will be provided for under Capital Grants in the budget for next year.

Secretary to Government,
Development Department

To

The Director of Industries and Commerce in Mysore,
The Secretary, Board of Management, Mysore Iron Works
The Director of Geology in Mysore,
The Comptroller to Government through Financial Secretary

P.H.

PROCEEDINGS OF THE GOVERNMENT OF HIS HIGHNESS

THE MAHARAJA OF MYSORE.

Read :-

Letter No. 772 dated the 29th December 1935 from the Secretary, Board of Industries and Commerce, forwarding a resolution of the Board accepting the recommendation of the Sub Committee, that the scheme for the manufacture of cement be adopted and that the factory be located at Bhadravati.

Order No. P 6012 - 15/35 44-34-9

Dated, Bangalore, 2nd April 1936.

The Board of Industries and Commerce have examined the scheme for the manufacture of cement from all aspects and recommended that a plant of the capacity of about 60 tons a day be installed at Bhadravati by Government and worked in association with the Mysore Iron and Steel Works.

Bhadravati has special facilities for the location of a Cement Factory, as all the raw materials are available in close vicinity, and the Iron and Steel Works can provide water, laboratory, engineering and workshop services at a small additional cost. Limestone, the most important raw material, is available at the quarries near Tangur where it is being mined by the Iron and Steel Works for use as flux in the blast furnace. The Department of Geology has made a detailed investigation and found that there is an extensive deposit which will satisfy for a long time the requirements of both the Cement Factory and the Iron and Steel Plant. The slag produced by the blast furnace is at present practically a waste material and suitable clay is also available, if found necessary, in large quantities in the tanks near by.

The capacity of the plant has been based on the

the quantity of slag available as also on the demand for cement in the State for some years to come. The bulk of the demand is from the Kolar Gold Field and in connection with the public works undertaken by Government. It is anticipated that satisfactory arrangements can be made with the Mining Companies for the supply of their requirements by the proposed Cement Factory.

Proposals have been received from various manufacturers of plant and machinery, and other necessary preliminary investigations have also been made. On the basis of these enquiries, it is estimated that the capital cost of the factory will be Rs. 5.5 lakhs and that the cost of manufacture of one ton of cement, including depreciation and interest on working capital will be about Rs. 25/- a ton, and that the scheme will prove remunerative even should there be a fall in the price of Cement.

Government are pleased to accord their sanction to the establishment of a Cement Factory at Bhadravati as an adjunct of the Mysore Iron and Steel Works at a capital cost of Rs. 5.5 lakhs. It is expected that the expenditure during the current year will be 1 lakh. An additional demand for this sum will be placed before the Legislative Council at its next Session. The balance of Rs. 4.5 lakhs will be provided for under capital grants in the budget for next year.

Secretary to Government,
Development Department.

To

The Director of Industries and Commerce in Mysore,
The Secretary, Board of Management, Mysore Iron Works,
The Director of Geology in Mysore,
The Comptroller to Government through Financial Asstt.

Government of his highness the Maharaja of Mysore.

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GENERAL AND REVENUE DEPARTMENTS.

G. O. No. D. 6012-15—I. & C. 44-34-9, dated 2nd April 1936.

Cement Factory.

Sanctions the scheme for the establishment of a —— at Bhadravati.

READ—

Letter No. 572, dated the 29th December 1935, from the Secretary, Board of Industries and Commerce, forwarding a resolution of the Board, accepting the recommendation of the Sub-Committee, that the scheme for the manufacture of cement be adopted and that the factory be located at Bhadravati.

ORDER No. D. 6012-15—I. & C. 44-34-9, DATED BANGALORE, THE 2ND APRIL 1936.

The Board of Industries and Commerce have examined the scheme for the manufacture of cement from all aspects and recommended that a plant of the capacity of about 60 tons a day be installed at Bhadravati by Government and worked in association with the Mysore Iron and Steel Works.

Bhadravati has special facilities for the location of a Cement Factory, as all the raw materials are available in close vicinity, and the Iron and Steel Works can provide water, laboratory, engineering and workshop services at a small additional cost. Limestone, the most important raw material, is available at the quarries near Gangur where it is being mined by the Iron and Steel Works for use as flux in the blast furnace. The Department of Geology has made a detailed investigation and found that there is an extensive deposit which will satisfy for a long time the requirements of both the Cement Factory and the Iron and Steel Plant. The slag produced by the blast furnace is at present practically a waste material and suitable clay is also available, if found necessary, in large quantities in the tanks near by.

The capacity of the plant has been based on the quantity of slag available as also on the demand for cement in the State for some years to come. The bulk of the demand is from the Kolar Gold Field and in connection with the public works undertaken by Government. It is anticipated that satisfactory arrangements can be made with the Mining Companies for the supply of their requirements by the proposed Cement Factory.

Proposals have been received from various manufacturers of plant and machinery, and other necessary preliminary investigations have also been made. On the basis of these enquiries, it is estimated that the capital cost of the factory will be Rs. 5·5 lakhs and that the cost of manufacture of one ton of cement, including depreciation and interest on working capital will be about Rs. 25 a ton, and that the scheme will prove remunerative even should there be a fall in the price of cement.

Government are pleased to accord their sanction to the establishment of a Cement Factory at Bhadravati as an adjunct of the Mysore Iron and Steel Works at a capital cost of Rs. 5·5 lakhs. It is expected that the expenditure during the current year will be Rs. 1 lakh. An additional demand for this sum will be placed before the Legislative Council at its next Session. The balance of Rs. 4·5 lakhs will be provided for under capital grants in the budget for next year.

M. VENKATANARANAPPA,
Secretary to Government,
Development Department.

To—The Director of Industries and Commerce in Mysore.
The Secretary, Board of Management, Mysore Iron Works.
The Director of Geology in Mysore.
The Comptroller to the Government through the Financial Secretariat.

Exd.—C. K.

W D 1792—GPB—125—8-4-36.